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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/006,523   | 11/30/2001  | Gerald H. Johnson    | 1502-US             | 1370             |
| 7590   | 02/13/2003  |                      | EXAMINER            |                  |
| Teradyne Inc.<br>30801 Agoura Road<br>Agoura Hills, CA 91301 |             |                      | HE, AMY             |                  |
|  |             | ART UNIT             | PAPER NUMBER        |                  |
|  |             | 2858                 |                     |                  |

DATE MAILED: 02/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |                |
|------------------------------|-----------------|----------------|
| <b>Office Action Summary</b> | Application No. | Applicant(s)   |
|                              | 10/006,523      | JOHNSON ET AL. |
|                              | Examiner        | Art Unit       |
|                              | Amy He          | 2858           |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on \_\_\_\_.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-15 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) 1-6, 8-13 and 15 is/are rejected.  
 7) Claim(s) 7 and 14 is/are objected to.  
 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 13 May 2002 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.  
 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.  
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) The translation of the foreign language provisional application has been received.  
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.

4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claims 7, 10 and 14 are objected to because of the following informalities:
  - (1) In Claim 7, it appears that it should depend from claim **6** instead of claim 1. Otherwise, there is a lack of antecedent basis for "respective transconductance amplifier circuits".
  - (2) In Claim 10, it appears that it should depend from claim **8** instead of claim 1.
  - (3) In Claim 14, it appears that it should depend from claim **13** instead of claim 8. Otherwise, there is a lack of antecedent basis for "respective transconductance amplifier circuits".

Appropriate corrections are required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6, 8-11, 13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Henze (U. S. Patent No. 4, 924, 170).

Referring to claims 1, 3, 4, 8 and 10-11, Henze discloses a modular power supply architecture (in Figure 5) for automatic test equipment including:

a control module (the combination of 50, 66, 70, 24, and 26 shown in Figure 5)

having a control signal output line , the control module including

a control circuitry (50 or the combination of 50, 66, 70, 24, and 26 or any one of PSM1-PSMn shown in Figure 5) to generate a control signal output line ; and

a current measurement circuitry (PSM1-PSMn which sense/measures a current output value ) coupled to the control signal output line;

a conditioning circuitry (D.C. filter 26 or rectifier 24 in Figure 5) coupled to the control signal line.

a plurality of output modules (PSM1-PSMn shown in Figure 5) having respective control inputs (36) coupled in parallel to the control signal output line to receive the control signal and having respective current outputs (34) connected in parallel, the plurality of output modules operative in response to the control signal to generate respective currents at the plurality of current outputs; and

a current output bus (34) disposed at the plurality of current outputs for summing the respective current outputs, the output bus being isolated from the control signal line.

Referring to claims 2 and 9, Henze discloses the control circuitry (in Figure 5) includes:

an error amplifier (current error amplifier 60 or voltage error amp 66) for detecting the difference between a desired power supply output and the actual power supply output, and operative to generate an error signal to correct for the detected difference;

a main loop amplifier circuit (amplifier 66) coupled to the output of the error amplifier;

a rectifier (rectifier 24) having inputs tied to the main loop amplifier and operative to determine whether the error signal requires source or sink current, the rectifier including source and sink circuitry to generate respective source or sink current control signals; and

driver circuitry (26) coupled to the rectifier to condition the source or sink current control signals.

Referring to claims 6 and 13, Henze discloses that the plurality of output modules comprises respective transconductance amplifier circuits (see amplifier circuits of PSM shown in Figure 5).

Referring to claim 15, it is the method claim corresponding to the rejected apparatus claims (claims 1 or 8). It is rejected for the same reasons as stated above for the rejection of the apparatus claims.

3. Claims 1, 3-6, 8, 10-12, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Wyman et al. (U. S. Patent No. 4, 035, 715).

Referring to claims 1, 3, 4, 8 and 10-11, Wyman discloses a modular power supply architecture (in Figures 1-2) for automatic test equipment including:

a control module (10) having a control signal output line, the control module including

a control circuitry (1) to generate a control signal output line ; and  
a current measurement circuitry (28 which can measure the highest current, column 3, lines 59-63) coupled to the control signal output line;

a conditioning circuitry (18 and 20) coupled to the control signal line.  
a plurality of output modules (power module 2-N) having respective control inputs coupled in parallel to the control signal output line to receive the control signal and having respective current outputs connected in parallel, the plurality of output modules operative in response to the control signal to generate respective currents (current generated at 28, column 3, lines 59-63) at the plurality of current outputs; and a current output bus (24 in Figures 1-2 or 28 in Figure 2) disposed at the plurality of current outputs for summing the respective current outputs, the output bus being isolated from the control signal line.

Referring to claims 5 and 12, Wyman et al. discloses the modular power supply architecture of claims 1, 4 and 8, wherein the conditioning circuitry includes:

biasing circuitry (74 in Figure 7) for generating a bias current signal for the plurality of output modules (power modules 2-N in Figures 1-2); and  
clamping circuitry (74 in Figure 7) can also be considered as a clamping circuitry since it provides positive and negative DC levels, column 9, lines 23-27) for establishing maximum and minimum current levels.

Referring to claim 15, it is the method claim corresponding to the rejected apparatus claims (claims 1 or 8). It is rejected for the same reasons as stated above for the rejection of the apparatus claims.

***Allowable Subject Matter***

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4. Claims 7 and 14 are objected to as being dependent upon a rejected base claim (claims 1 and 8), but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

5. The following prior art made of record and not relied upon are considered pertinent to applicant's disclosure:

Unger (U. S. Patent No. 5,936, 450) discloses a waveshaping circuit including a controller and current summing circuitry.

Rozman et al. (U. S. Patent No. 6,005,773) discloses a power supply module with biasing and clamping circuitry.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy He whose telephone number is (703) 305-3360. The examiner can normally be reached on 8:30am-5pm Monday through Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, N. Le can be reached on (703) 308-0750.

The official Fax numbers for the organization are (703-872-9318) Before-Final and (703-872-9319) After-Final Office actions. Any inquiry of a general nature relating to this application should be directed to the receptionist at (703) 305-4900.

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AH

February 7, 2003

*AL*

N. Le  
Supervisory Patent Examiner  
Technology Center 2800